ABDOLLAH ZAKERI

3660 Richmond Ave. Apt. 256, Houston, Texas 77046

Phone: (720) 205 8662

Email: azakeri@uh.edu

RESEARCH / WORK INTERESTS

- Artificial Intelligence (AI), Machine Learning, Deep Learning
- Computer Vision and Image/video processing
- Biometrics

EDUCATION

Bachelor of Software Engineering	**University of Birjand,** Department of Electrical and Computer Engineering, Iran	9/23/2015 - 3/20/2020
Master of Artificial intelligence and robotics	Shahrood University of Technology, Iran	9/23/2020 - 8/1/2022
Ph.D. in Computer Science	University of Houston, Houston, TX	8/20/2022 - Present

SELECTED PROJECTS AND WORK EXPERIENCE

- **Learning Disability (LD) risk assessment based on handwriting**
  - o Multi-modal classification of LD based on handwritten essays and the corresponding transcripts
  - o Cluster computing and multi-GPU training of SOTA multi-modal networks
- **Mushroom Localization and detection for automatic harvesting purposes**
  - o Image acquisition, labeling, and training of SOTA object detection models
  - o Working with Monterey mushroom farm
- **COVID severity detection for pediatric patients**
  - o Classifying the severity of COVID-19 in pediatric patients given Chest X-Ray (CXR) images and clinical data
  - o Design, training, and evaluation of deep neural networks using a private dataset provided by Texas Children's Hospital (TCH)
- **WhisperNet: Visual-Only Lip-Based Biometric Authentication**
  - o Deep Siamese network for lip-based person re-identification
- **Kavirtire company, smart quality assessment program**
  - o Python for Image pre-processing
  - o Used CNN to train a classifier that relates each tire to a predefined defection group by receiving an X-ray video of the sample.
- **Jujube Classification System Based on Several Pricing Factors**
  - o Used Matlab and Python for Image processing and training the classifier
  - o Trained model reached an accuracy of 98.2%
- **Emotion Detection Based on Facial Expressions**
  - o Pre-processing of camera feed input using openCV and python
  - o Deep learning algorithms used to train the Emotion Classifier Model
- **Image Processing and OCR-based authentication system**
  - o Used Python for Image pre-processing, OCR system, and web service

TEACHING ASSISTANTSHIP

Advanced Programming (Object Oriented Programming)	September 2018 - December 2018
Data Structures and Algorithms	January 2019 - June 2019

Artificial Intelligence and Expert Systems	September 2019 - December 2019
Computer Vision and Image Processing	September 2019 - December 2019
Artificial Neural Networks (Master's)	September 2021 - December 2021

SKILLS

Programming Languages	C++, Python, Shell Scripts, Matlab
AI Frameworks and Libraries	Tensorflow, Keras, PyTorch, Scikit-learn, Numpy, Pandas, PyTorch Lightning, Hugging Face Transformers
Computer Vision frameworks	TorchVision, OpenCV, ImageIO, YOLO
Web Development and Design	PHP (Symfony framework), HTML, XML, CSS, Bootstrap, JavaScript(JS), JQuery, AngularJS, RESTful API, Python (Flask, Django)
Database	MySQL, SQL, Access
Operating Systems	Microsoft Windows, MacOS, Linux
Other Skills	Cluster computing, Project management and Version Control systems such as Git and Trello, Object Oriented Programming, Docker

HONORS AND AWARDS

First place in 6th Birjand University Annual ACM/ICPC	May 2017
Head judge and financial sponsor of 7th Birjand University Annual ACM/ICPC	May 2018
48th place in 2016 ACM/ICPC Sharif University of Technology – Asia Region	December 2016
President of scientific computer association of Birjand University for two consecutive years	2016 - 2018
CEO and team manager of Pencode programming and software development company	July 2016 - Aug 2022
Coach of Birjand University team for 2018 ACM/ICPC Sharif University of Technology – Asia Region	December 2018
Attendance in workshop entitled "Online tools for Artificial Intelligence" held by Web Standards School	December 2018
Attendance in 1st conference of Healthcare computing systems and technologies	April 2019

CERTIFICATES AND ACCOMPLISHMENTS

Deep Learning Specialization certificate offered by Deeplearning.ai

Generative Adverserial Networks (GANs) Specialization certificate offered by Deeplearning.ai

Tensorflow Developer certificate offered by Deeplearning.ai

Tensorflow, Advanced Techniques Specialization certificate offered by Deeplearning.ai

PUBLICATIONS

1- Zakeri, A., Hassanpour, H., Khosravi, M.H., Nourollah, A.M. WhisperNetV2: SlowFast Siamese Network For Lip-Based Biometrics. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI). Shahrood University of Technology, Faculty of Computer Engineering. **(Under Review)**

2- Zakeri, A., Hassanpour, H. WhisperNet: Deep Siamese Network For Emotion and Speech Tempo Invariant Visual-Only Lip-Based Biometric. 7th International Conference on Signal Processing and Intelligent Systems (2021). Shahrood University of Technology, Faculty of Computer Engineering.

3- Zakeri, A., Hedayati, R., Khedmati, M., & Taghipour-Gorjikolaie, M. (2021). Classification of jujube fruit based on several pricing factors using machine learning methods. **(ArXiv Pre-print)**

REFERENCES

Prof. Fatima Merchant
fmerchant@uh.edu

Department of Engineering Technology
University of Houston

Prof. Driss Benhaddou
dbenhaddou@uh.edu

Department of Engineering Technology
University of Houston